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## NOTICE OF ALLOWANCE AND FEE(S) DUE

27572 7590 05/13/2008

HARNESS, DICKEY & PIERCE, P.L.C.  
P.O. BOX 828  
BLOOMFIELD HILLS, MI 48303

EXAMINER

HYUN, SOON D

ART UNIT

PAPER NUMBER

2616

DATE MAILED: 05/13/2008

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/668,708

09/23/2003

John F. Austermann III

9919-002COC

2209

TITLE OF INVENTION: SYSTEM FOR COMMUNICATING WITH ELECTRONIC EQUIPMENT

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	\$1440	\$300	\$0	\$1740	08/13/2008

**THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.**

**THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.**

### HOW TO REPLY TO THIS NOTICE:

I. Review the SMALL ENTITY status shown above.

If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status:

A. If the status is the same, pay the TOTAL FEE(S) DUE shown above.

B. If the status above is to be removed, check box 5b on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and twice the amount of the ISSUE FEE shown above, or

If the SMALL ENTITY is shown as NO:

A. Pay TOTAL FEE(S) DUE shown above, or

B. If applicant claimed SMALL ENTITY status before, or is now claiming SMALL ENTITY status, check box 5a on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and 1/2 the ISSUE FEE shown above.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

**IMPORTANT REMINDER: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.**

## PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), to: **Mail** **Mail Stop ISSUE FEE**  
**Commissioner for Patents**  
**P.O. Box 1450**  
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INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

27572 7590 05/13/2008

HARNESS, DICKEY & PIERCE, P.L.C.  
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Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

**Certificate of Mailing or Transmission**

I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below.

(Depositor's name)
(Signature)
(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/668,708	09/23/2003	John F. Austermann III	9919-002COC	2209

TITLE OF INVENTION: SYSTEM FOR COMMUNICATING WITH ELECTRONIC EQUIPMENT

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	\$1440	\$300	\$0	\$1740	08/13/2008
EXAMINER		ART UNIT	CLASS-SUBCLASS			
HYUN, SOON D		2616	370-241000			

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

☐ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.

☐ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. Use of a Customer Number is required.

2. For printing on the patent front page, list

- (1) the names of up to 3 registered patent attorneys or agents OR, alternatively, 1 \_\_\_\_\_
- (2) the name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed. 2 \_\_\_\_\_
- 3 \_\_\_\_\_

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE

(B) RESIDENCE: (CITY and STATE OR COUNTRY)

Please check the appropriate assignee category or categories (will not be printed on the patent): ☐ Individual ☐ Corporation or other private group entity ☐ Government

4a. The following fee(s) are submitted:

- ☐ Issue Fee
- ☐ Publication Fee (No small entity discount permitted)
- ☐ Advance Order - # of Copies \_\_\_\_\_

4b. Payment of Fee(s): (Please first reapply any previously paid issue fee shown above)

- ☐ A check is enclosed.
- ☐ Payment by credit card. Form PTO-2038 is attached.
- ☐ The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment, to Deposit Account Number \_\_\_\_\_ (enclose an extra copy of this form).

5. Change in Entity Status (from status indicated above)

- ☐ a. Applicant claims SMALL ENTITY status. See 37 CFR 1.27.
- ☐ b. Applicant is no longer claiming SMALL ENTITY status. See 37 CFR 1.27(g)(2).

NOTE: The Issue Fee and Publication Fee (if required) will not be accepted from anyone other than the applicant; a registered attorney or agent; or the assignee or other party in interest as shown by the records of the United States Patent and Trademark Office.

Authorized Signature \_\_\_\_\_

Date \_\_\_\_\_

Typed or printed name \_\_\_\_\_

Registration No. \_\_\_\_\_

This collection of information is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.

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10/668,708	09/23/2003	John F. Austermann III	9919-002COC	2209

27572 7590 05/13/2008

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EXAMINER

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ART UNIT

PAPER NUMBER

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DATE MAILED: 05/13/2008

## Determination of Patent Term Adjustment under 35 U.S.C. 154 (b) (application filed on or after May 29, 2000)

The Patent Term Adjustment to date is 895 day(s). If the issue fee is paid on the date that is three months after the mailing date of this notice and the patent issues on the Tuesday before the date that is 28 weeks (six and a half months) after the mailing date of this notice, the Patent Term Adjustment will be 895 day(s).

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (<http://pair.uspto.gov>).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

# Notice of Allowability

Application No.

10/668,708

Examiner

SOON-DONG D. HYUN

Applicant(s)

AUSTERMANN ET AL.

Art Unit

2616

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 05 February 2008.
2. ☒ The allowed claim(s) is/are 1-18.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All b) ☐ Some\* c) ☐ None of the:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

## Attachment(s)

- |  |  |
|--|--|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892)   | 5. <input type="checkbox"/> Notice of Informal Patent Application                      |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 6. <input type="checkbox"/> Interview Summary (PTO-413),<br>Paper No./Mail Date _____. |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO/SB/08),<br>Paper No./Mail Date _____    | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment                    |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit<br>of Biological Material | 8. <input type="checkbox"/> Examiner's Statement of Reasons for Allowance              |
|  | 9. <input type="checkbox"/> Other _____.   |

/Chi H. Pham/  
SPE, AU 2616  
5/09/08

### EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Gregory Schivley on 5/6/2008.

The application has been amended as follows:

1. (currently amended) A system for communicating information on a network having pieces of electronic equipment connected to the network by cables having a plurality of wires therein, said system comprising:

a central module having at least one power source ~~having a receiver therein~~;

a first piece of equipment;

a first cable having wires therein connected between the central module and the first piece of equipment;

a first remote module utilized in conjunction with the central module ~~in generating a variable impedance across at~~ to alter the flow of current within at least a pair of wires in the first cable, the altered current flow communicating information about the first piece of equipment to the central module while the first piece of equipment is physically connected to the network via the first cable ~~to define a first multi-bit signal associated with the first piece of equipment~~;

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a second piece of equipment;

a second cable having wires therein connected between the central module and the second piece of equipment; and

a second remote module utilized in conjunction with the central module in generating a variable impedance across to alter the flow of current within at least a pair of wires in the second cable, the altered current flow communicating information about the second piece of equipment to the central module while the second piece of equipment is physically connected to the network via the second cable, to define a second multi-bit signal associated with the second piece of equipment.

2. (currently amended) The system of claim 1 wherein the ~~multi-bit~~ information is ~~transmitted from the remote module~~ communicated to the ~~receiver~~ central module over the same data wires in the cable that normally carry high frequency data communications over the network to the electronic equipment.

3. (currently amended) The system of claim 1 wherein ~~each remote module transmits the information~~ is a unique signal related to the piece of equipment to which each remote module is associated.

4. (currently amended) The system of claim 3 wherein said central module further comprises:

a monitor for decoding the unique signal communicated over the cable  
~~transmitted from the remote modules~~ thereby identifying the equipment associated  
therewith.

5. (currently amended) The system of claim 1 wherein the remote modules are  
devices attached to ~~computer~~ the equipment.

6. (original) The system of claim 1 wherein the central module identifies the  
existence and location of the equipment without power being applied to the equipment.

7. (currently amended) The system ~~as defined in Claim 4~~ of claim 1 wherein the  
central module further comprises a power modulator for modulating power from the  
power source and coupling a modulated power signal over the cables to the remote  
modules, and

wherein the remote module further comprises a power demodulator for  
demodulating the modulated power signal to detect information sent from the central  
module;

whereby the remote modules can operate on power from the central module  
without the electronic equipment being powered, and further that information can be bi-  
directionally transmitted between the central module and remote modules.

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8. (currently amended) The system of claim 1 wherein the central module detects the absence of a proper signal ~~from a remote module~~ associated with a piece of equipment on the network and blocks network ~~information~~ services from being ~~communicated~~ delivered to that piece of equipment.

9. (currently amended) The system of claim 1 which further comprises:  
a database having information that identifies each piece of equipment and its location on the network, along with an identification signal for each piece of equipment ~~provided by its associated remote module~~; and

wherein the system periodically updates the database as a function of the communicated information ~~transmitted identification signals~~ to thereby track the identity and location of the equipment on the network.

10. (currently amended) The system of claim 1 wherein the central module is used to limit access to selected programs as a function of the ~~signals~~ information ~~transmitted~~ communicated by the remote modules.

11. (currently amended) The system ~~as defined in Claim 2~~ of claim 2 wherein the information is in the form of multi-bit information and wherein the bit rate of the multi-bit information is less than about 1% of the bit-rates of the high frequency data communications.



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12. (currently amended) The system ~~as defined in Claim 1~~ of claim 1 wherein the ~~central module further includes a first power source for supplying power to the remote modules so that information can be transmitted~~ communicated to the central module even if the electronic equipment is powered off.

13. (currently amended) The system ~~as defined in Claim 2~~ of claim 1 wherein the network is an Ethernet network.

14. (currently amended) The system ~~as defined in Claim 2~~ of claim 11 wherein the frequency of the high frequency data is ~~about~~ at least 10 Mbits/sec and the bit rate of the ~~modulated signal~~ multi-bit information is not more than 100kb/sec.

15. (previously presented) The system of claim 1 wherein the first and second cables are twisted pair Ethernet cables.

16. (currently amended) A system for communicating information on a network, said system comprising:

a central module having at least one power source ~~including a receiver~~;

a first piece of equipment;

a first cable having a plurality of wires therein, at least a pair of wires in said first cable connecting the first piece of equipment to the central module through a first loop;

a first remote module connected to the first piece of equipment;

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said first remote module including a transmitter utilized in transmitting first low-frequency multi-bit information to the ~~receiver~~central module over wires in the first cable without disturbing normal network high frequency data communication carried by wires in the first cable, said first remote module being utilized in conjunction with the central module to generate said first multi-bit information by altering the flow of current in the first loop while the first piece of equipment is physically connected to the network via the first cable;

a second piece of equipment;

a second remote module connected to the second piece of equipment;

a second cable having a plurality of wires therein, at least a pair of wires in said second cable connecting the second piece of equipment to the central module through a second loop; said second remote module including a second transmitter utilized in transmitting second low-frequency multi-bit information to the ~~receiver~~central module over at least a pair of wires in the second cable without disturbing normal network high frequency data communication carried by wires in the second cable, said second remote module being utilized in conjunction with the central module to generated said second multi-bit information by altering the flow of current in the second loop while the second piece of equipment is physically connected to the network via the second cable; and

wherein said ~~receiver~~central module detects the multi-bit information transmitted over the first and second cables from the first and second pieces of equipment on the network.

17. (currently amended) The system ~~as defined in Claim 16~~ of claim 16 wherein:  
the first transmitter is electrically coupled to the first loop and is utilized in  
modulating an electrical characteristic of the first loop to define the first low frequency  
multi-bit information associated with the first piece of equipment; and  
the second transmitter is electrically coupled to the second loop and is utilized in  
modulating an electrical characteristic of the second loop to define the second low  
frequency multi-bit information associated with the second piece of equipment.

18. (currently amended) The system of claim 16 wherein at least one of the first  
and second cables ~~are~~ is a twisted pair Ethernet ~~cables~~ cable.

2. Any inquiry concerning this communication or earlier communications from the  
examiner should be directed to SOON-DONG D. HYUN whose telephone number is  
(571)272-3121. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's  
supervisor, Chi H. Pham can be reached on 571-272-3179. The fax phone number for  
the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2616

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Chi H Pham/  
Supervisory Patent Examiner, Art  
Unit 2616  
5/9/08

/Soon D Hyun/  
Examiner, Art Unit 2616

**Issue Classification**

Soon D. Hyun 5/6/2008  
(Assistant Examiner) (Date)

/Chi H. Pham/ 5/9/08  
Primary Examiner) (Date)

**Total Claims Allowed: 18**

O.G. Print Claim(s)	O.G. Print Fig.
1	3

☒ Claims renumbered in the same order as presented by applicant☐ CPA☒ T.D.□ R.1.47[illegible]